



Western Fisheries Research Center (WFRC)

Western Fisheries Science News



A volunteer releases a tagged Lahontan cutthroat trout. Photo by Danielle Johnson.

Fishing for Science at Independence Lake, CA

On a beautiful day in June, scientists and volunteers headed to Independence Lake, a small mountain lake in the northeastern Sierra Nevada Mountains of Northern California, to take part in a fishing derby. The goal: To capture and tag native Lahontan cutthroat trout and remove invasive fish from the lake. While the day turned out to be a lot of fun, it also provided USGS and its partners a unique opportunity to gather important scientific data on fish species living in Independence Lake and conduct ecological restoration.

For the last eight years USGS scientists from the Reno Field Station of Western Fisheries Research Center have been working with partners at The Nature Conservancy, California Department of Fish and Wildlife, USDA Forest Service, The Truckee River Watershed Council, U.S. Bureau of Reclamation, Desert Terminal Lakes Program, the Truckee Meadows Water Authority, the Bella Vista Foundation and U.S. Fish and Wildlife Service to restore the Independence Lake ecosystem to a pre-disturbed state. Independence Lake is the only place in the Truckee River watershed where Lahontan cutthroat trout (LCT) have never been completely extirpated and have maintained a self-reproducing population. Over the years LCT throughout the watershed have been impacted by (continued on pg. 2)

Events

WFRC Scientists Serve as Instructors in Salmon Disease Workshop: Microbiologists, Diane Elliott and Gael Kurath, are invited lecturers for the 2013 Salmon Disease Workshop being held at Oregon State University on July 15-26, 2013. This workshop for fish health professionals emphasizes recent advances and developments in our understanding of diseases of salmonid fishes. For more information, contact Diane Elliott at dgelliott@usgs.gov or 206-526-6282.

WFRC Photo Contest- Show Us What Puget Sound Means to You!: Through July WFRC is accepting submissions of photos of Puget Sound. One winner will be eligible for a day trip to the site of the Elwha dam removal with a USGS ecologist; a night in the historic lightkeeper's house on Marrowstone Island; and a tour of our unique salt-water research facility where experiments are underway with captive herring. For more details visit <http://wfrc.usgs.gov/outreach/psphotocontest.html> or contact Lisa Hayward at 206-526-6596 lhayward@usgs.gov

WFRC Climate Change and Sea-Level Rise Guidance for US Army Corps of Engineers: On July 17, USGS researchers with the Skagit Climate Science Consortium (SC2) met with the US Army Corps of Engineers (USACE) Seattle District to provide insight on integrating projected climate change and sea-level rise into USACE general investigations aimed at mitigating flood hazards. For more information, contact Eric Grossman at egrossman@usgs.gov or 206-526-6282 x334.

(continued from pg. one) non native species, water diversion, habitat fragmentation, dam construction, and overfishing. Non-native fish, such as brook trout, brown trout, and kokanee salmon are present in the system and may impact LCT populations through competition and predation. In 2010, The Nature Conservancy acquired some of the land around Independence Lake where they have been dedicated to preserving the pristine nature of Independence Lake as habitat for fish and wildlife. Together with our partners, USGS is finding ways to help return an intact natural community in a rare freshwater ecosystem back to a nearly pre-disturbed state. Experts believe that restoring complete ecosystems, where possible, is the best way to increase the resilience of freshwater systems to future environmental change.

The fishing derby, held on June 8th, was a full-day event. The Nature Conservancy provided boats for nine volunteer fishermen to ensure that no invasive species were accidentally introduced during the derby, and to support volunteers. USGS scientists worked together with fishermen and partners to tag and collect data on all fish caught during the derby. Juvenile and un-tagged adult LCT were tagged with Passive Integrated Transponder (PIT) tags which will allow biologists to identify individuals and track the population dynamics. Scientists also took advantage of the opportunity to gain additional information on fish assemblages. Scientists used a stomach lavage to remove gut contents of LCT and whitefish for food habit analysis and collected scales to assess age of LCT. The entire gut of non-native fishes such as kokanee were preserved for diet analysis and scales will be used in conjunction with otoliths and opercles to verify age.

Aside from providing scientific data and ecological restoration the fishing derby helped forge a stronger connection among fishing volunteers, scientists, and the unique ecosystem of Independence Lake. USGS fish biologist Danielle Johnson later commented on her interactions with the fishermen, saying how she enjoyed seeing how passionate they were and how much they enjoyed embracing their passion and helping at the same time. "Everybody was having a great time." Many fishermen are already planning to come back for the next fishing derby. For more information visit <http://wfrc.usgs.gov/projects/9388BQM/9/> or contact Gary Scoppettone at gary_scoppettone@usgs.gov

Press

On July 11, WFRC was mentioned in the *Reno News & Review*. The story describes joint efforts between USGS and The Nature Conservancy in a program to tag Lahontan cutthroat trout in Independence Lake, CA. <http://www.newsreview.com/reno/trout-tracking/content?oid=10560369> For more information, contact Gary Scoppettone at gary_scoppettone@usgs.gov

Events

USGS Participates in Tribal College Summer Science Camp to Promote STEM: On July 15, USGS researchers Eric Grossman (PCMSC/WFRC) and Christopher Curran (WAWSC) will guide the Northwest Indian College's 3rd annual 2013 Summer Science Camp students in measuring river flow and tidal current velocities, sediment transport, and water quality across the Nooksack River delta and estuary. The field exercise provides students with hands-on experience operating hydrologic instrumentation to examine the physical processes of watershed runoff, the tidal prism and rising sea level, sediment transport, and the impacts of climate change on flood hazards and coastal ecosystems, in particular impacts to Native American First Foods. For more information, contact Eric Grossman at egrossman@usgs.gov 206-526-6282 x334 or Christopher Curran at ccurran@usgs.gov 253-552-1614.

Publications

New Report Investigates Life History Responses of Salmonids to Changes in Food Availability: WFRC scientists recently completed an open-file report titled "Theoretical life history responses of juvenile *Oncorhynchus mykiss* to changes in food availability using a dynamic state-dependent approach" which used a state dependent model to understand how the juvenile *Oncorhynchus mykiss* population may respond to increased availability of salmon eggs in their diet. For more information, visit <http://pubs.er.usgs.gov/publication/ofr20131154> or contact Jason Romine at jromine@usgs.gov at 509-538-2299 x 262.

USGS Western Fisheries Research Center
6505 N.E. 65th Street
Seattle, Washington 98115
<http://wfrc.usgs.gov/> 206-526-6282
To unsubscribe email lhayward@usgs.gov